A STUDY OF THE ACADEMIC CAREERS OF SELECTED NON-ACADEMICALLY-GIFTED STUDENTS IN ALBERTA COMPOSITE HIGH SCHOOLS

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A STUDY OF THE ACADEMIC CAREERS OF SELECTED NON-ACADEMICALLY-GIFTED STUDENTS IN ALBERTA COMPOSITE HIGH SCHOOLS

A DISSERTATION

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

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by

JOHN JOSEPH NEARING

EDMONTON, ALBERTA

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SYNOPSIS

The high schools of Alberta, formerly geared to provide preparation for university-bound students only, are now looked upon as institutions designed to meet the needs of all students. Students who do not have the interest or ability to complete a matriculation program successfully are now encouraged to stay, whereas in past years they would have been encouraged to leave high school. The Composite High School has been designed to serve this philosophy of secondary education, and many new courses have been introduced into the high school curriculum to implement this concept. Thus, a new "type" of student now attends high school, one who does not have the ability to matriculate. These students are the non-academically-gifted in our high schools, and are the subjects of this study.

This study defines the non-academically-gifted student as one who has an IQ of 100 or less. Four hundred and fifty-two of these students were selected from five Alberta Composite High Schools. Their academic careers were examined to attempt to determine the extent to which they are taking advantage of these new opportunities provided for them to obtain a high school education. The data were obtained from the record cards of the selected high schools, and all matters considered pertinent to their academic careers were

gathered - attendance, credits earned, marks in each course, etc.

It was found that over 25% of the students enrolled in Grade X could be described as non-academically-gifted. In spite of its undesirability as far as these students were concerned, the vast majority selected the matriculation program (In fact, only twelve matriculated successfully). Drop-outs were very high, over 73% dropping out before the end of Grade XII. In actual subjects studied, it was noted that these students earned better grades in non-academic, rather than academic courses.

Summing up, the writer felt justified in concluding that if the composite high school is to meet the needs of all students, many changes may be necessary. In view of the findings of this study, it appears that few students of low ability in composite high schools are making best use of the opportunities available to them for furthering their education.

TABLE OF CONTENTS

CHAPTER		PAGE
I.	THE PROBLEM	1
	Limitations of This Study	3
II.	RELATED LITERATURE AND RESEARCH	7
III.	THE EXPERIMENTAL DESIGN	11
IV.	THE STUDENT PERSONNEL SELECTED	17
	(A) Numbers of Selected Students	17
	(B) Sex of the Selected Students	19
	(C) Analysis of the IQ of the Selected Students	22
V.	ATTENDANCE	25
	(A) Attendance of Grade X Students	27
	(B) Attendance of Grade XI Students	28
	(C) Attendance of Grade XII Students	29
VI.	PROGRAMS OF STUDY OF THE SELECTED STUDENTS . .	33
VII.	THE DROP-OUT SITUATION	40
	(A) Drop-Outs Considered on a Grade Basis . .	40
	(B) Drop-Outs Considered According to Sex of the Selected Students	42
	(C) Drop-Outs Considered According to the Program Chosen by the Selected Students.	44
VIII.	ACHIEVEMENT OF THE SELECTED STUDENTS IN SUBJECTS STUDIED	49

TABLE OF CONTENTS

CHAPTER		PAGE
	(A) Grade X	50
	(B) Grade XI	52
	(C) Grade XII	54
IX.	HIGH SCHOOL CREDITS EARNED BY THE SELECTED STUDENTS	57
	(A) Grade X	58
	(B) Grade XI	59
	(C) Grade XII	61
X.	HIGH SCHOOL GRADUATES	66
XI.	SUMMARY AND CONCLUSIONS	70
BIBLIOGRAPHY	. . . . .	75

LIST OF TABLES

TABLE		PAGE
I.	Sex of the Selected Students	19
II.	Intelligence Quotients of the Selected Students.	22
III.	Attendance of Selected Grade X Students, 1954 - 55	27
IV.	Attendance of Selected Grade XI Students in Grade X During 1954 - 55, and in Grade XI During 1955 - 56	28
V.	Attendance of Selected Grade XII Students, Grade X (1954 - 55); Grade XI (1955 - 56); and Grade XII (1956 - 57)	29
VI.	Drop-Outs of Selected Students During the School Term, September to June	42
VII.	Percentages of Letter Grades and Point Averages Earned by Selected Grade X Students in Alberta Composite High Schools, Classified According to Subject Categories . .	51
VIII.	Percentages of Letter Grades and Point Averages Earned by Selected Grade XI Students in Alberta Composite High Schools, Classified According to Subject Categories . .	53
IX.	Percentages of Letter Grades and Point Averages Earned by Selected Grade XII Students in Alberta Composite High Schools, Classified According to Subject Categories . .	55

LIST OF TABLES

TABLE		PAGE
X.	Credits Earned by Selected Grade X Students, 1954 - 55	58
XI.	Credits Earned by Selected Grade XI Students, 1954 - 56	59
XII.	Credits Earned by Selected Grade XII Students, 1954 - 57	61
XIII.	Numbers of Selected Students Attaining High School Diplomas and Matriculation Standing	67
XIV.	Numbers and Percentages of the Selected Students who Enrolled for a Fourth Year in High School	68

LIST OF FIGURES

FIGURE		PAGE
1.	Percentage of Students with an IQ of 100 or Less, Enrolled in Alberta Composite High Schools	17
2.	Enrollment of Selected Students According to Sex, Considered on a Percentage Basis . .	20
3.	Percentage of Selected Students Enrolled in the General, Matriculation and Commercial Programs in Grades X, XI and XII	35
4.	Drop-Outs of Selected Students, on a Percentage Basis, by Grades	40
5.	Drop-Outs According to Sex in Each Grade on a Percentage Basis	43
6.	Drop-Outs According to Program of Study in Each Grade on a Percentage Basis	45
7.	Percentages of Selected Students Who Attained High School Diplomas and Matriculation Standing	66

CHAPTER I

THE PROBLEM

Within recent years the high schools of the Province of Alberta have experienced an unprecedented growth. Evidence obtained from the Annual Reports of the Department of Education[1] discloses that Alberta's high school population has tripled since 1927. Further, the percentage of students in attendance at high school in 1927 was 11.4% of the total school population; in 1957 this proportion was 19.8%. Thus, though the increase in the population of the province may have contributed to much of the increase in actual numbers attending high school, it is clear that, proportionately, nearly twice as many students attended Alberta's high schools in 1957, as did in 1927.

Traditionally, the high school has been regarded as an institution preparing students to enter university. In recent years, however, the concept of the function of the high school has been broadened to include service to all students. The educational ideal is now universal secondary education, and, in order to meet the needs of all students, the high school curriculum has been expanded. New subjects have been introduced, such as Automotives and Industrial Arts, to help meet these needs, thus encouraging more students, including those who do not plan to attend university, to stay

in school. Various studies[2] have shown that most students leave school because of a lack of interest, and a curriculum unsuited to their needs. These new courses constitute an attempt to meet these needs and interests to curb the alarming drop-out situation.

The traditional curriculum of the high school has not been discarded, because the high school must still perform its function of preparing students to enter university. However, as noted in the preceding paragraph, the curriculum has been expanded. This expansion has made it possible for an entirely different type of student to enter high school. Those students who are not interested in attending university, and also those who cannot attend university because of an inability to meet matriculation requirements, are encouraged to attend high school as long as they can profit thereby.

This new educational philosophy has been implemented during approximately the past ten years. Evidence of the change in the philosophy underlying secondary schools in Alberta is readily available. T. C. Byrne, Chief Superintendent of Schools for the Province of Alberta, points out:

> With one or two exceptions, no special purpose high schools exist in Alberta. We have no commercial nor technical high schools, and few, if any, strictly academic or college preparatory centres .....Our high schools all aim, as if driven by inner compulsions, at comprehensiveness in program in so far as enrolment, accommodation and equipment will permit. Guided by these limitations, they seek to expand their services within the scope of the total high school program.[3]

The purpose of this study is to attempt to determine how successful this new concept of secondary education has been in practice. To what extent are those students, who are not able to attain matriculation standing, taking advantage of these opportunities to further their education? Are they actually coming to school? In which programs of study do they enroll? What subjects do they choose? How many complete high school successfully? The answers to these and related questions were sought in the hope that further progress may be possible towards the goal of universal secondary education. These students who are not able to attain matriculation standing are the non-academically-gifted in our high schools. One of the best measures of academic ability available is the Intelligence Quotient, or IQ. Students with an IQ of 100 or less were selected as not having the ability to matriculate, and are the subjects of this study.

Limitations of this Study

The selection of IQ 100 as the lower limit of ability necessary to matriculate could not be completely justified, though some evidence was available that provided objectivity for this selection. A study conducted by Dr. Byrne[4] in 1954-55, found that "only about 280 out of every 1,000 students enrolled in Grade IX obtain a High School Diploma; and only about 54 of these have an IQ (Henmon-Nelson) of 105 or less".

This study appeared to indicate that few, if any, with an IQ of 100 or less had matriculated successfully.

Dr. A. J. Cook, Director of Student Advisory Services, University of Alberta, was consulted regarding the number of students entering the University of Alberta with an IQ of 100 or less. It was found that on the basis of results from the Wechsler-Bellevue test administered at the university, no students within this range had been enrolled in a degree program. Again, it appeared that few students with this IQ matriculate successfully.

The Alberta Matriculation Study Sub-Committee Report[5] quotes Dr. J. A. B. McLeish, writing in Saturday Night (Sept. 15, 1956) on the topic "Who Should Go To College?" as follows:

> If it is true that roughly a quarter of our school population has at least the IQ level of 110, and if ..... as in Ontario .... only 3 per cent of the youngsters entering elementary school ultimately graduate from university, then it would seem that we are failing to educate a large number of "first class" young people at the summit end of education ....[5]

It appears that Dr. McLeish regards IQ 110 as necessary to enter university, and his opinion seems to have the tacit approval of the Alberta Matriculation Study Sub-Committee.

Finally, several experienced Alberta high school teachers were asked what IQ they had found necessary, in general, for a student to matriculate successfully. Without exception, they replied "about IQ 110".

Thus, while the selection of IQ 100 as the lower limit

of ability for successful matriculation was partly arbitrary, the evidence indicated that there was considerable justification for selecting this score.

Another limitation of this study should also be noted at this time. Eleven different IQ tests had been used to measure the intelligence of the students. The Otis was most widely used, though many Henmon-Nelson test scores were also noted. The most recently recorded IQ score was the basis for selecting the students for this study.

The data presented in this study must be interpreted in the light of these limitations to avoid drawing conclusions that may be invalid or unreliable.

FOOTNOTES TO CHAPTER I

[1]Province of Alberta, Department of Education, Annual Report: 1927 (Edmonton: Queen's Printer), p. 78.

[1]Province of Alberta, Department of Education, Annaul Report: 1957 (Edmonton: Queen's Printer), p. 134.

[2]Albert E. Hohol, "Factors Associated with School Drop-outs," Alberta Journal of Educational Research, I: 7-17, March, 1955.

[3]T. C. Byrne, "Alberta," Composite High Schools in Canada, University of Alberta Monographs in Education, No. 1 (The Committee on Educational Research, Faculty of Education, University of Alberta, 1959), p. 66.

[4]T. C. Byrne, Unpublished Data, Department of Education, 1955. (Mimeographed).

[5]Joint Committee to Coordinate High School and University Curricula. Progress Report - Matriculation Study Sub-Committee, February, 1958, p. 32.

CHAPTER II

RELATED LITERATURE AND RESEARCH

Literature on the non-academically gifted in our schools can be found in practically every professional publication for educators. These students are the subjects of speeches, of panel discussions and symposia of every form. Typical of the literature on the topic are periodical articles largely philosophical in nature, the gist of which are revealed in their titles: "A Defence of the Less-Gifted";[6] "Our School D. P.'s: Why the Non-Academic Program Fails";[7] etc. References by speakers to "universal secondary education", the education of "everyman's child", "meeting the needs of all students", are heard frequently, all stressing the need to educate these students. As noted previously, the high school curriculum has been expanded to meet the needs of the non-academic students. However, little or no research has been done to find out if the needs of these students are actually being met by this curriculum expansion.

Research on gifted students has reached astounding proportions. Monroe[8] comments, "The gifted child has been the basis of numerous studies, several of which may appropriately be referred to an monumental." The identification and characteristics of the gifted, and the adaptation of the school to their needs, are all subjects which have been

treated extensively. The 1950 edition of the Encyclopedia of Educational Research lists seventy-nine studies of the gifted.

Students of low ability have also been the subjects of a great deal of research by educators. Monroe[9] lists over sixty titles on the slow, the retarded and the mentally defective, as the non-academically gifted is variously known.

Thus, the non-academically gifted, as defined in this study, cannot be included in either of the groups studied in the research discussed in the preceding paragraphs; for gifted students are those with an IQ of 130 (or thereabouts, depending on the study), and retarded students are those with an IQ of 85 or less, and only a handful of the selected students fall into this latter category. It would appear then, that these selected students are "average" students, for the research on extremes in IQ does not deal with them. However, this average group is really two groups, those who have the ability to matriculate and those who have not. At this point, the problem is further complicated by the lack of Canadian educational research. Most educational research has been done in the United States, and American research on college entrance or matriculation is of little value for a study being made in Canada. This is due to the fact that colleges in the United States vary so widely in their admission requirements that "any high school graduate can

succeed in obtaining a degree by attending a college adapted to his ability level."[10] Several studies have been made in Canada on the problem of matriculation, yet there appears to be no research on those students in our high schools who do not have the ability to matriculate.

It seems to this writer that educational literature is too glib on the topic of the non-academically gifted. Ignored by research, yet raised to the heights by our philosophy of education, the question is raised as to how these students are treated in actual practice. This writer hopes that his small effort will make some contribution to the meagre supply of literature available on this important topic.

FOOTNOTES TO CHAPTER II

[6]Francis A. Kleinhenz, "A Defence of the Less Gifted," Clearing House, 32:80, October, 1957.

[7]Herlin Slocomb, "Our School D. P. 's: Why the Non-Academic Program Fails," Clearing House, 25:345, February, 1951.

[8]Walter S. Monroe, (ed.), Encyclopedia of Educational Research (New York: The MacMillan Company, 1956), p. 505.

[9]Ibid., pp. 732-3.

[10]S. C. T. Clarke, Review of Some Previous Studies on Matriculation Problems, "Alberta Journal of Educational Research, IV: 30-39, March, 1958.

CHAPTER III

THE EXPERIMENTAL DESIGN

The organization of Alberta high Schools is varied. High schools in the province range from single-teacher schools to sixty-teacher schools, and enrolments vary from fifteen pupils to fourteen hundred pupils, respectively. The nine largest schools in the province are the composite high schools, so called because they offer a complete range of high school courses, including matriculation, commercial, technical, vocational and general patterns. The composite organization is, in reality, an organization to implement the philosophy underlying high school education in the Province of Alberta.

Five Alberta Composite High Schools were selected for this study. These five schools were basically similar, in that all offered the same four programs or routes through high school; however, certain differences were noted, though these differences were of degree rather than kind. For example, students attending different schools could choose different electives, yet still be considered on the same program of study, their elective choices depending on local offerings and local employment opportunities. Thus, in schools in a rural environment, agriculture is an elective chosen by many students; in urban areas, courses in agriculture may not even

be offered; however, the students in both cases may be classified as general or technical program students.

School A is the largest high school in Alberta, and has the most extensive program. There are three other composite high schools in the city in which it is located, but their facilities are more limited, especially in shop and commercial electives. As a result, many students who reside in another part of the city, but who wish to take these special options, attend this school. Consequently, more students whose interests are non-academic attend this school than would be the case if all schools could offer the same courses. The effect of this is noted very early in the study and should be kept in mind when the findings of this study are being considered.

School B is slightly smaller than School A. Only two of the high schools in the city in which it is located are classified as composite, and, as a result, non-academic students are probably attracted to this school from other parts of the city because of the more varied programs offered. This was the first school in the province to be considered a composite high school.

School C is considerably smaller than the two preceding schools. The great majority of the students are from the city in which it is situated, though a small number come from outlying districts.

School D serves mainly city students, but many students are transported to this school from considerable distances, many from strictly rural areas. A unique feature of this school is its operation on a semester system. The school year is divided into three semesters, September to December, December to March, and March to June. This school is about the same size as School C.

School E is located in a small city, though it also serves outlying areas like School C, but unlike School D, the majority of its students are urban dwellers. It is approximately the same size as Schools C and D.

These comments on the various composite schools which were used in this study should be kept in mind when the data presented are being considered. The study may, at times, present data from which, it appears, conclusions may be drawn. However, this data may well be affected by the composition of the student population or the organization of the particular school being considered, rendering any conclusions drawn unreliable, if not actually invalid.

The writer visited these five schools personally, and collected the data for this study from the permanent record cards in the school files, and/or the cumulative record cards of individual students in the guidance department in the school. The following information was taken from these records:

(1) name of the student

(2) sex

(3) date of entering high school

(4) program of study (when given)

(5) grades attended

(6) subjects taken, and marks earned, in each grade

(7) credits earned in each grade

(8) attendance (total days in each grade)

(9) date of drop-out

(10) IQ, according to the most recent test score recorded. In several instances the IQ of the student was not recorded in the school records. The files of the Department of Education were then consulted, and if the IQ was available there, this test score was treated as being the most recent.

The academic history of the selected students was studied from several points of view, such as attendance, subjects taken, credits earned, etc. As much of the derived information as possible was then recorded in tables and figures, with observations being made on each table and figure to clarify the data presented. Considerable difficulty was encountered in organizing these data, and the reader must note carefully the different methods which were used in treating the various aspects of these students' academic careers.

It was decided to study the performance of students who had enrolled in the composite high schools in 1954 - 55. This gave a recent group, yet one for which the data would be nearly complete.

CHAPTER IV

THE STUDENT PERSONNEL SELECTED

(A) NUMBERS OF SELECTED STUDENTS

In 1954 - 55, in the schools under discussion, 1749 students were enrolled in Grade X. This total does not give the number of students who enrolled for the first time in September, 1954, for it also includes those who were repeating Grade X, and others who entered at different times during the school year. The enrolments were as follows:

School A	598
School B	522
School C	253
School D	189
School E	187
TOTAL:	1749

As noted previously, the record cards of these 1749 students were examined, and the IQ's recorded thereon were noted, if 100 or below. 452 were in this category, or 25.8% of the total of 1749. On a per school basis, the figures were as follows:

School A	175
School B	146
School C	35
School D	44
School E	52
	452

Figure I presents these figures as percentages of the number enrolled in Grade X in 1954 - 55.

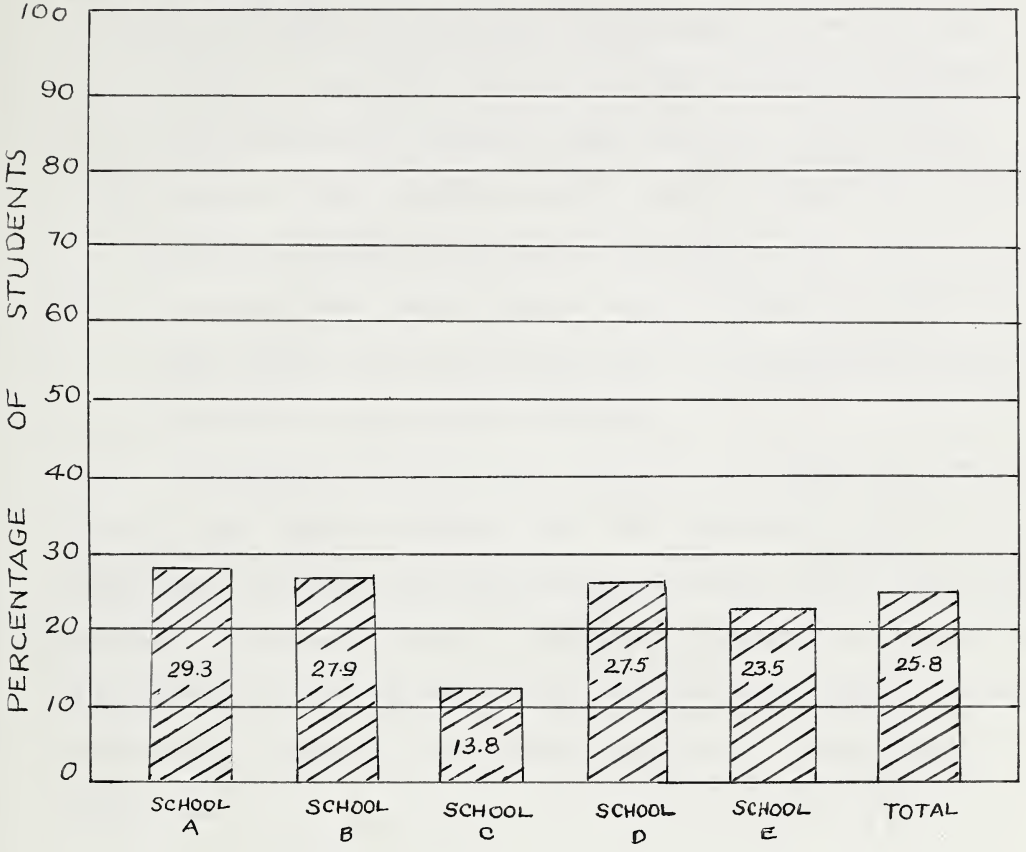


FIGURE I

PERCENTAGE OF STUDENTS WITH AN IQ OF 100 OR LESS, ENROLLED IN GRADE X IN 1954-55, IN ALBERTA COMPOSITE HIGH SCHOOLS

Observations of Figure I:

(1) School A, probably for reasons already indicated (see p. 11), had the greatest proportion of low ability students enrolled; nearly one out of three students who enrolled in Grade X, had an IQ of 100 or less.

(2) School C had a considerably smaller proportion of low ability students enrolled than any of the other schools; actually the proportion of such students enrolled in this school was less than half the proportion enrolled in three of the other schools.

It should be noted here that the IQ's of all the students in the various schools were not available, and in at least one instance, the data obtained could have been markedly altered if such had been available. IQ scores were not found for seven students in School A, twenty-six in School B, and fourteen in School C; none were missing in either School D or School E.

(B) SEX OF THE SELECTED STUDENTS

Is the high school program of greater interest and value to male or female students of lower ability? This is a question of great interest to educators. This study, of course, cannot be expected to provide a conclusive answer, but it should be able to shed some light on the matter. The selected students in the various schools in 1954-55 are broken down according to sex in Table I.

TABLE I

SEX OF THE SELECTED STUDENTS

	School A	School B	School C	School D	School E	TOTAL
Male	82	78	19	31	29	239
Female	93	68	16	21	15	213
TOTAL	175	146	35	52	44	452

Observations from Table I:

(1) Only in School A did girls outnumber boys. This could well be accounted for by the fact that commercial courses, catering generally to girls, are offered at this school and not entirely at the other schools in the city, thus attracting students who would otherwise be attending other schools.

(2) It may be noted that School E enrolled almost twice as many boys as girls.

(3) Without supporting data on the overall school population according to sex, this information, while interesting in itself, indicated no definite trend in any of the schools, and conclusions must not be drawn from these figures on the merits of the composite high school in attracting either more boys or more girls of low ability.

Figure II reproduces Table I, showing the data on a percentage basis.

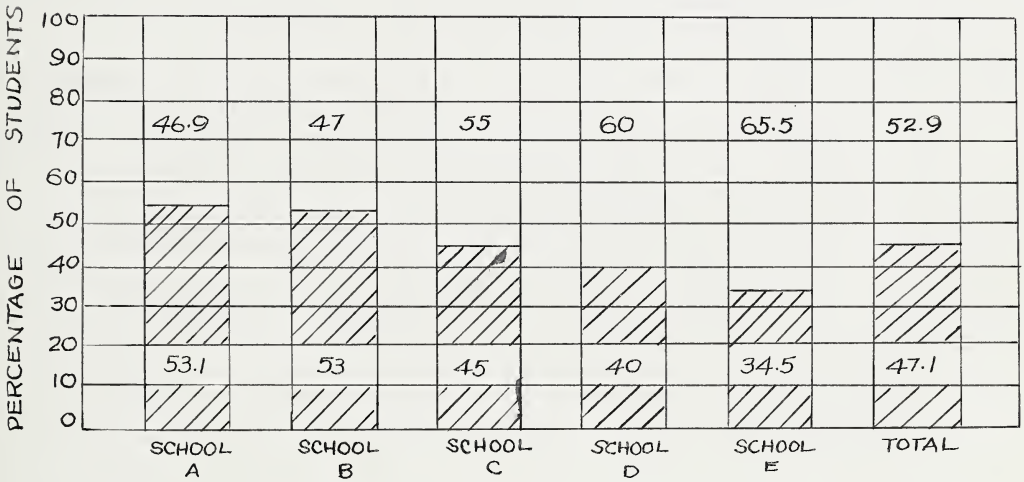
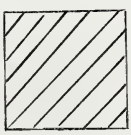


FIGURE II

ENROLLMENT OF SELECTED STUDENTS ACCORDING TO SEX, CONSIDERED ON A PERCENTAGE BASIS

Female  Male

Further discussion on this matter will be included in Chapter V, "The Drop-out Situation", where the holding power of the school in relation to sex is discussed.

(C) ANALYSIS OF THE IQ OF THE SELECTED STUDENTS

It must be remembered that an upper limit (IQ 100) was imposed by the writer when the IQ of these students was being noted from the record cards in the individual schools. However, no lower limit was set, and thus the following information gives further insight into the abilities of the students involved when taken as a group. The 452 students found to have an IQ of 100 or less, had a mean IQ of 93.8; the crude mode was 99; the median 95.2; and the Standard Deviation was 5.4.

The data for the individual schools is presented in Table II, permitting the overall picture to be seen more readily.

TABLE II

INTELLIGENCE QUOTIENTS OF THE SELECTED STUDENTS

	School A	School B	School C	School D	School E	TOTAL
Crude Mode[11]	99	96	99	96	99	99
Median	95.5	94.6	97.7	94.7	95.6	95.2
Mean	96.1	92.4	96.1	93.3	94.6	93.8
Stnd. Dev.	1.6	6	.4	4.5	.5	5.4

Observations of Table II:

(1) School C led the other schools when median (97.7) and mean (96.1) were considered. The crude mode for this school (99) was as high as that of any of the others,

and the Standard Deviation, indicating the concentration of scores around the mean, was the smallest of the five.

(2) School E followed closely behind School C in almost all of these categories.

(3) Schools C and E enrolled the smallest proportion of non-academically gifted students (see Figure I, p. 17); thus, when observations (1) and (2) (above) are considered as well, it seems that a superior group of students, within the limits defined, were enrolled in these schools.

FOOTNOTES TO CHAPTER IV

[11]Henry E. Garrett, Statistics in Psychology and Education, (New York: Longmans, Green and Co., 1954), p. 36.

CHAPTER V

ATTENDANCE

Students of low ability must attend school regularly if they are to succeed. Absences, especially if prolonged or frequent, are very serious matters for these students. Poor attendance causes a falling off in school work, and the student's interest in school declines. This declining interest frequently results in failure, and consequent discouragement, leading to drop-out from school. Several studies of drop-outs[12] have noted that poor attendance records were a definite symptom of approaching drop-outs.

In the discussion of attendance data, the records of the selected students were broken into three classifications, one for each grade. Students classified as Grade X are those who earned credits in Grade X, but none in Grade XI; Grade XI students are those who earned credits in Grade XI and also in Grade X, but no credits in Grade XII; and Grade XII students are those who earned credits in Grade XII, and also in Grades X and XI. It should be noted that for the Grade XI students there were attendance records for two years, the first in Grade X and the second in Grade XI. Similarly, attendance records for the Grade XII students included data for three years. The figures recorded are total days attended.

The data for School D must be noted carefully. This

school operates on a semester system, and hence credits could be earned even though only a few months of school during the year were actually attended. Hence, the figures from this school will generally be lower than those from any of the others, but this does not necessarily indicate that this school's attendance record was any lower than the records in other schools.

(A) ATTENDANCE OF GRADE X STUDENTS

Table III presents details on the attendance records of the selected students in Grade X.

TABLE III

ATTENDANCE OF SELECTED GRADE X STUDENTS, 1954-55

	School A	School B	School C	School D	School E	TOTAL
Crude Mode	188	188	198 183	188	178	188
Mean	178.2	178.4	180.5	174.5	181.3	178.6
Median	185.9	178	173	170.3	177.7	176.4
Stnd. Dev.	6	11.5	3.5	4.1	17	8.9

Observations of Table III:

(1) The mean attendance in each school was almost the same, in spite of local differences in causes of absenteeism.

(2) The mean represented a loss of almost twenty days in each school, or about four school weeks.

(3) Because of the wide range, perhaps the median was a better indication of central tendency, yet in three schools the median was even lower than the mean.

Table IV presents details of the selected Grade XI students' attendance.

TABLE IV

ATTENDANCE OF GRADE XI STUDENTS, IN GRADE X, DURING 1954-55, AND IN GRADE XI, DURING 1955-56

	School A		School B		School C		School D		School E		TOTAL	
	X	XI	X	XI	X	XI	X	XI	X	XI	X	XI
Crude Mode	193	193	193	193	193	188	188	183	193	183	193	193
Mean	187.6	178.7	188.5	179.3	187.3	164.8	183.5	177.4	185.7	180.7	186.5	176.2
Median	189.3	185	188	184.5	191.2	170.5	186.3	179.7	190.5	182.5	188.8	177.8
Stnd. Dev.	2.5	18	2.6	13	10.6	21.5	6.4	11.2	13	8.5	7.6	17.9

Observations of Table IV:

(1) The similarity of all the schools in Grade X was striking.

(2) These Grade XI students had a much better attendance record in Grade X than the Grade X students reported in Table III.

(3) The attendance record of these students while they were in Grade XI was not as good as it was while they were in Grade X.

(4) The mean in Grade XI represented a loss of nearly four weeks of school.

(5) School C, in Grade XI, had a considerably lower attendance record than the other schools.

(C) ATTENDANCE OF GRADE XII STUDENTS

Table V presents details on the attendance of the selected students in Grade XII.

TABLE V

ATTENDANCE OF SELECTED GRADE XII STUDENTS; GRADE X (1954-55); GRADE XI (1955-56) AND GRADE XII (1956-57)

	School A			School B			School C		
	X	XI	XII	X	XI	XII	X	XI	XII
Crude Mode	193	188	188	198	193	183	188	193	193 188 183
Mean	190	187.1	184.2	194.2	185.3	181.5	192	189.1	188.7
Median	192.4	188.1	186.4	191	191	184.7	192.1	192.1	185
Stnd. Dev.	6	5.7	8.5	9.5	6.4	10.2	1.9	6.3	4.9

	School D			School E			TOTAL		
	X	XI	XII	X	XI	XII	X	XI	XII
Crude Mode	193	193	182	188	193	188	193	193	188
Mean	189.8	186.5	183.5	189.7	184.1	184.2	191.1	186.4	184.4
Median	190.4	187.2	180.4	189.6	188.8	186.2	191.3	189.1	183.8
Stnd. Dev.	2.3	5.8	8.3	7	7.5	5.4	5.4	6.1	6.2

Observations of Table V:

(1) The similarity among all schools was again noted.

(2) Time lost in Grades X and XI was only slight, though it increased somewhat in Grade XII.

(3) These Grade XII students had a much better attendance record in Grade X than the Grade X students reported in Tables III and IV.

(4) In Grade XI, this group's attendance was considerably higher than that of the Grade XI class reported in Table IV, p. 28.

General Observations Made from Tables of Attendance:

(1) The great similarity among all the schools was obvious. No school had a considerably better or worse attendance record than any other.

(2) The longer the students stayed in school, the worse were their attendance records. This was shown when the figures of the Grade XI (Table IV, p. 28) and Grade XII students were considered. Thus, the Grade XI students had a better attendance record in Grade X than they had when they were in Grade XI. Similarly, the Grade XII students had a better attendance record in Grade X than they had when they were in Grade XI; their Grade XI record, in turn, was better than their attendance record in Grade XII.

(3) The Grade XII students had a better attendance record when they were in Grade X (Table V, p. 29) than the Grade X students did (Table III, p. 27); also better than the Grade XI students had when they were in Grade X

(Table IV, p. 28). They also had a better record in Grade XI (Table V, p. 29), than the Grade XI students had when they were in Grade XI (Table IV, p. 28). This seems to indicate that these students were more interested in school. It is quite possible, too, that their academic records reflect this additional interest. This matter will be discussed later in the study in Chapter IX.

(4) Studies which hold that attendance is low in the year immediately preceding drop-out are borne out by this study.

FOOTNOTES TO CHAPTER V

[12]Hohol, op. cit., p. 12.

CHAPTER VI

PROGRAMS OF STUDY OF THE SELECTED STUDENTS

Four programs of study are offered in the composite high school: matriculation, commercial, technical and general. In processing the data which he obtained, however, the writer found it impossible to distinguish between general program and technical program students. Information concerning the program in which students are enrolled is not included in the school records, and thus, these students were classified in the following manner. Matriculation program students and commercial program students were easily separated, so for purposes of this study, any student not clearly in either of these categories was classed as being in the general program. This must be kept clearly in mind when interpreting the data. It is generally agreed by authorities[13] on the composite school that students of lower ability should choose courses other than the academic if the composite school is to be a success. However, great prestige is attached by teachers, parents and students alike to the academic program; and even though this course may not be within the interests of, and may even be beyond their ability, it is still commonly selected by many non-academically gifted students.

Many course changes were made by the selected students; this was especially true when they entered Grade XI, most of

the changes being from matriculation to the general program. Thus, the data on courses of study have considerable overlap resulting from these course changes and these must be kept in mind when interpreting Figure III. This figure shows the percentage of students enrolled in the various courses of study in Grades X, XI and XII.

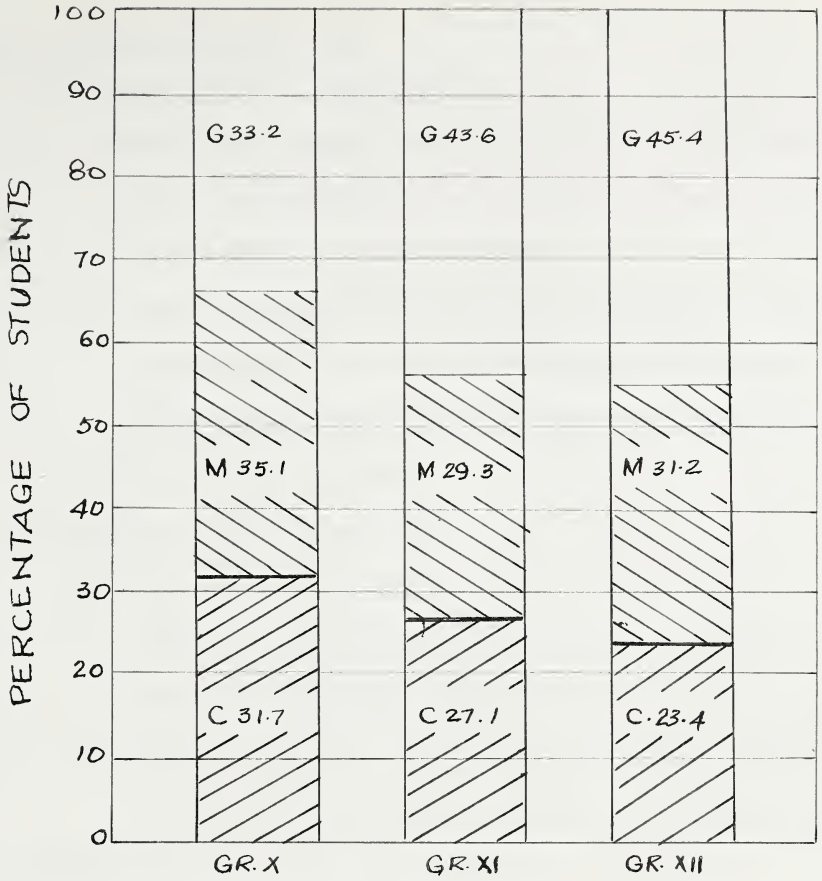


FIGURE III

PERCENTAGE OF SELECTED STUDENTS ENROLLED IN THE GENERAL, MATRICULATION AND COMMERCIAL PROGRAMS IN GRADES X, XI AND XII*

*Matriculation - M General - G Commercial - C

Observations of Figure III:

(1) From the Grade X portion:

(a) a larger proportion of the selected students chose the matriculation program than either the commercial or the general.

(b) the commercial program was chosen by the smallest proportion of these students, but it must be remembered that this program was confined generally to girls.

(2) From the Grade XI portion:

(a) the general program, rather than the matriculation, enrolled the greater proportion of the selected students in Grade XI.

(b) the proportion enrolled in the commercial program was nearly as large as that in the matriculation.

(3) From the Grade XII portion:

(a) the greatest proportion of the selected Grade XII students was enrolled in the general program, repeating the Grade XI pattern.

(b) the proportion enrolled in the commercial program was considerably below that in matriculation.

General Observations of the Courses of Study Chosen by the Selected Students:

As noted previously, most students seemed to prefer the matriculation program, possibly because of the prestige

associated with it. Thus, in Grade X, most of these low ability students chose this program, though the general program outranked it in Grades XI and XII. This appears to indicate that the matriculation course was beyond the abilities of these students, but they preferred to attempt matriculation, rather than to begin a general course as soon as they entered high school. Dr. Byrne comments:

> It is not surprising that the general route through high school has little status and attracts only those students who are unable to perform in the other fields .... The general program leads nowhere. Other course patterns have outlets, or futures .... The general program, however, is like a bus without a destination - not to be boarded except for protection from the elements!
>
> Students do not choose the general route; they slide into it .... The prescriptive academic program is the most common route through high school for Alberta students. As the failure rate in this program is heavy the general route is being augmented steadily by those who cannot otherwise succeed.[14]

Further details on this topic are presented in Chapter VII, "The Drop-Out Situation".

FOOTNOTES TO CHAPTER VI

[13]H. M. Evans, "British Columbia," Composite High Schools in Canada, University of Alberta Monographs in Education No. 1 (The Committee on Educational Research, Faculty of Education, University of Alberta, 1959), p. 83.

[14]T. C. Byrne, "Alberta," Composite High Schools in Canada, University of Alberta Monographs in Education, No. 1 (The Committee on Educational Research, Faculty of Education, University of Alberta, 1959), p. 74.

CHAPTER VII

THE DROP-OUT SITUATION

(A) DROP-OUTS CONSIDERED ON A GRADE BASIS

As discussed previously in the opening chapter of this study, the function of secondary education in Alberta has changed. The curriculum of the traditional high school was designed to prepare students for university entrance. Students of low ability were encouraged to leave school; and, in any case, their drop-out would be hastened by probable repeated failures. However, the high school is no longer so selective in its membership, and all students are encouraged to stay in school as long as both they and society can benefit. The students selected for this study were those of low ability who, due to this changed character of secondary education, are now encouraged to complete a high school program. The purpose of this chapter will be to determine the extent to which these students are remaining in school in order to take advantage of these opportunities to further their education.

Figure IV presents the drop-outs from each grade on a percentage basis, classified according to the schools attended by the selected students.

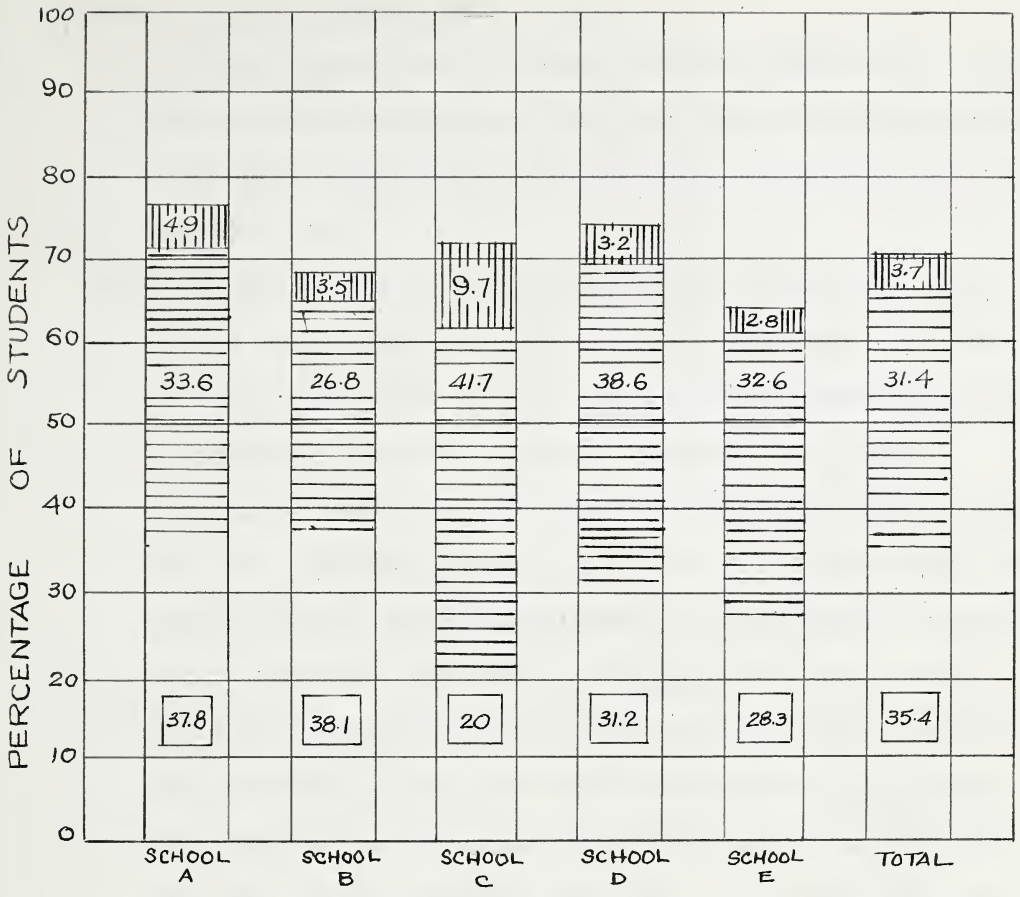


FIGURE IV

PERCENTAGE OF SELECTED STUDENTS WHO DROPPED OUT, , CLASSIFIED BY SCHOOLS AND GRADES*

*Grade X Grade XI Grade XII

Observations of Figure IV:

(1) A large proportion of these students drop out. In the selected schools, none had less than a sixty per cent drop-out, and in one school, over seventy-five per cent dropped out.

(2) A sharp decline in the proportion of drop-outs was noted among the selected students in Grade XII. Of course, one point must be kept in mind: the drop-outs recorded in Grades X and XI included two groups: (1) those who completed the year and who did not return for the following year; (2) those who left during the school term; however, the Grade XII drop-outs include only those who dropped out during the school term. The heavier drop-outs over holiday periods may be attributed probably to the fact that satisfactory employment was found, and the student was reluctant to give up his new found security and income to return to school. When the numbers of drop-outs during each school term were considered, the heaviness of the drop-out over the summer months was evident, for the total drop-outs in each grade were quite similar. These figures are presented in Table VI.

TABLE VI

DROP-OUTS OF SELECTED STUDENTS DURING THE SCHOOL TERM SEPTEMBER TO JUNE

	School A	School B	School C	School D	School E	TOTAL
Grade X	25	23	3	2	3	56
Grade XI	15	8	7	1	4	35
Grade XII	9	4	3	2	1	19

(B) DROP-OUTS CONSIDERED ACCORDING TO SEX OF THE SELECTED STUDENTS

In discussions of drop-outs the question is frequently raised whether the high school program is more suited to the needs and interests of boys or girls. Several studies[15] have shown that the drop-out rate is higher among boys than girls, thus concluding that the school program is more suited to the needs of girls than boys. The sex of the selected students has already been discussed briefly, (Table I, p. 19; Figure II, p. 20), and this section of the study will add to this discussion by relating the sex of the students to the drop-out rate from school.

Figure V reveals some interesting information on this matter, presenting the proportions of male and female drop-outs from each grade in each school.

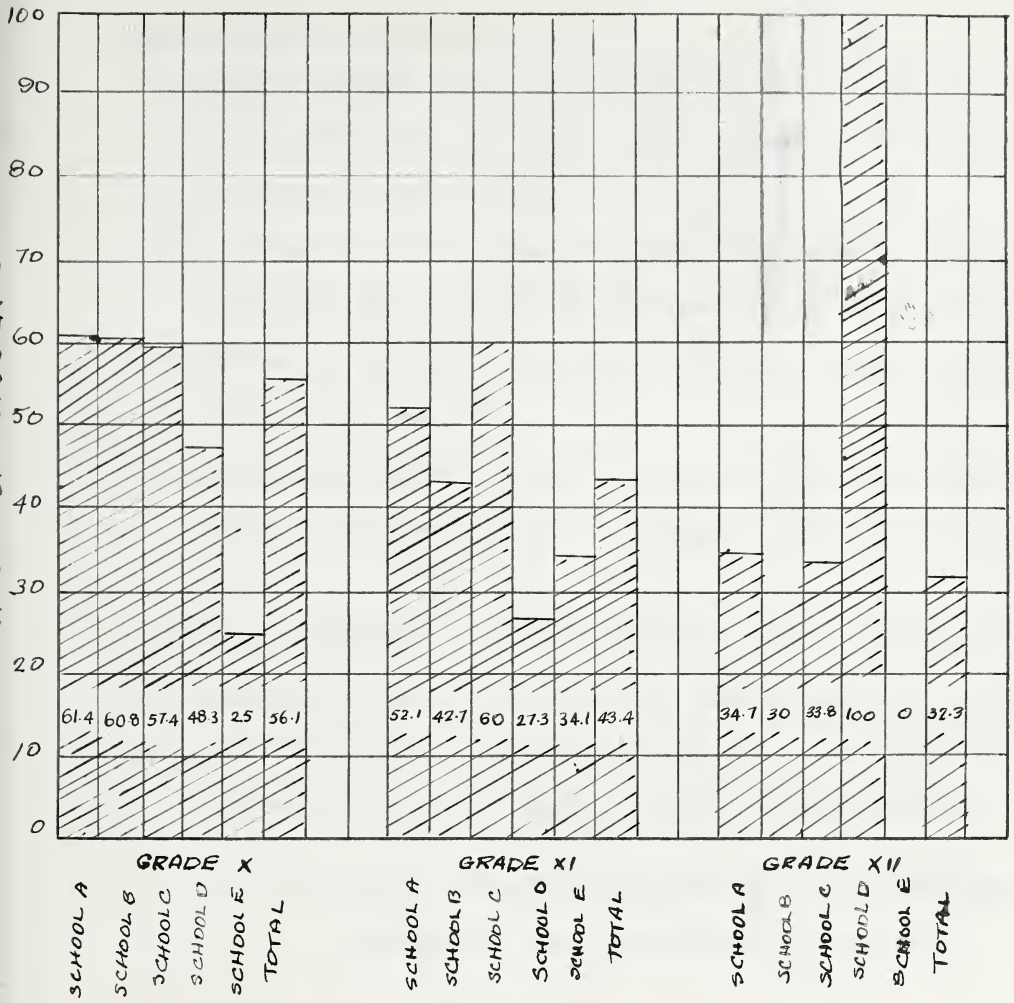


FIGURE V

DROP-CUT ACCORDING TO SEX IN EACH GRADE,

ON A PERCENTAGE BASIS*

*Male

Female

Observations from Figure V:

(1) The drop-out rates among the selected students, boys and girls, in each grade and in each of the schools showed considerable variation.

(2) A greater proportion of girls than boys, on the average, dropped out in Grade X; however, a greater proportion of boys than girls, on the average, dropped out in Grades XI and XII.

(3) The proportion of boys dropping out in Grade XII was nearly double that which dropped out in Grades X and XI.

(4) While differences among schools may be noted, it seemed to the writer that no single school was doing outstandingly good or bad work in retaining these selected students in the composite high school.

(C) DROP-OUTS CONSIDERED ACCORDING TO THE PROGRAM CHOSEN BY THE SELECTED STUDENTS

The programs chosen by the selected students were discussed in Chapter VI. This portion of the study examines the drop-out situation from the viewpoint of program, and tries to determine which program retains the greatest number of students.

Figure VI shows the percentage of students which drop out from each program.

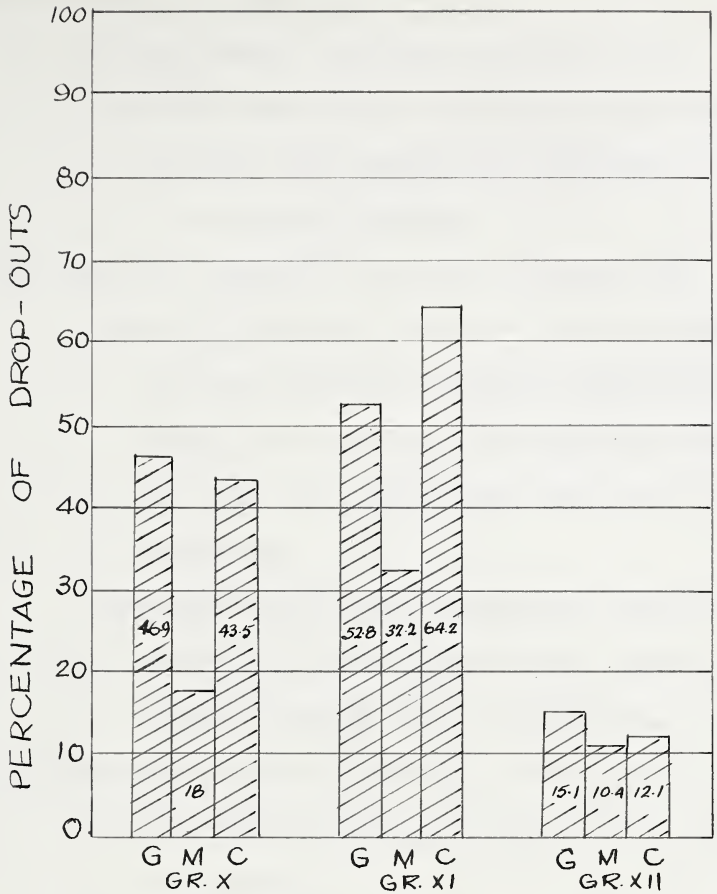


FIGURE VI

PERCENTAGE OF STUDENTS ENROLLED IN VARIOUS PROGRAMS WHO DROPPED OUT, CLASSIFIED BY GRADES*

*G: General M: Matriculation C: Commercial

Observations of Figure VI:

(1) From the Grade X portion of Figure VI:

(a) more than twice the proportion dropped out from General and Commercial programs as from the Matriculation program.

(2) From the Grade XI portion of Figure VI:

(a) the Commercial program had succeeded the General program with the largest proportion of drop-outs. This could well be explained by the availability of jobs for girls with two years commercial training.

(b) although the Matriculation program had the best retention, its drop-out had nearly doubled the Grade X proportion of drop-outs.

(3) From the Grade XII portion of Figure VI:

(a) the Matriculation program still led in student retention.

(b) General program again led drop-outs, closely followed by Commercial.

(c) drop-outs in each program were very similar.

General Observations Made On "The Drop-out Situation":

This portion of the study has discussed the drop-out situation from three points of view: the drop-outs from each grade, the drop-outs according to sex in each grade, and the drop-outs from each of three programs in each grade. Some

general observations could be made from these data.

The most obvious observation is that a large proportion of these students drop out. In the selected schools none had less than a sixty per cent drop-out, and in one school, over seventy-five per cent dropped out. If approximately seven out of ten of these students dropped out of school within three years, many questions can be raised concerning the ability of the composite school, as it now stands, to serve the needs and interests of these students.

With regard to drop-out according to sex, the evidence supporting either argument - that schools best meet the interests and needs of girls than boys, or vice versa - was inconclusive. When totals were considered, more girls than boys dropped out. But, when considered on a grade basis, more boys than girls dropped out in Grades XI and XII, while many more girls than boys dropped out in Grade X.

The data for drop-outs according to programs is limited by the changes in programs by students as previously discussed (p. 35). Probably the most obvious point to be noted was the superiority of the matriculation course in all three years in retaining students.

FOOTNOTES TO CHAPTER VII

[15]Hohol, op. cit., p. 17.

CHAPTER VIII

ACHIEVEMENT OF THE SELECTED STUDENTS IN SUBJECTS STUDIED

The subjects taken by the selected students were divided into six categories; Constants, Academic Electives, Household Economics, Shop, Commercial and Fine Arts. The numbers of students who earned final marks in these subjects were recorded, and the marks themselves (in terms of letter grades) were also noted. The per cent of students earning a certain letter grade was computed from these data. In this way, the subjects in which these selected students were most and least successful could be noted. This information is presented in the following tables.

To facilitate comparisons in each subject category, a point rating system was devised by the writer. Four points were assigned for an "H", three for an "A", two for a "B", one for a "C", and none for a "D". Thus a point average of 1.46, for example, represents an average mark midway between a "C" and a "B". It should be noted that this point system was purely arbitrary, and that the averages derived were not necessarily the same as the averages of the grades obtained by the students in these subjects. However, the system did give an average mark that was useful in comparing the achievements in the six categories.

(A) GRADE X

Table VII presents the percentages of letter grades, and the point averages, earned in the various subject categories by the selected students in Grade X.

In reading this table, and the two succeeding tables, it should be noted that in certain subject categories, (notably Fine Arts) fewer than ten final marks were recorded; these marks were of little use for comparative purposes, and such results are not included, other than to note the number of final marks. Further, in the observations following these tables, Fine Arts are not considered, because of the few students who earned final marks in these courses. Their inclusion would tend to give only a biased representation.

TABLE VII

PERCENTAGES OF LETTER GRADES AND POINT AVERAGES EARNED BY SELECTED GRADE X STUDENTS IN ALBERTA COMPOSITE HIGH SCHOOLS, CLASSIFIED ACCORDING TO SUBJECT CATEGORIES

	Subject Categories	Total Number of Final Scores	PERCENTAGES OF LETTER GRADES H	A	B	C	D	Point Averages
SCHOOL A	Constants	750	1.6	15.2	38.6	28.8	15.4	1.46
	Academic Elect.	237	2.1	18.5	29.1	29.1	20.6	1.51
	Shop Electives	124	1.6	21.1	55.4	15.4	6.5	2.11
	House Ec.Elect.	82	9.7	34.1	28.1	21.9	6.1	2.19
	Commercial Elect.	124	6.4	23.4	32.3	20.9	16.9	1.73
	Fine Arts Elect.	9						
SCHOOL B	Constants	614	.009	20.7	42.7	23.6	12.1	1.58
	Academic Elect.	211	.009	9.5	38.9	29.4	21.4	1.39
	Shop Electives	79	2.5	22.8	51.8	21.5	1.3	2.04
	House Ec. Elect.	21	9.5	23.8	33.3	23.8	9.5	2
	Commercial Elect.	90	8.9	14.4	51.1	20	5.5	2.01
	Fine Arts Elect.	20	10	45	35	10		2.55
SCHOOL C	Constants	160		19.4	45	26.9	8.7	1.75
	Academic Elect.	55	5.4	23.6	50.9	14.5	5.4	2.09
	Shop Electives	31	6.4	35.4	38.7	12.9	6.4	2.23
	House Ec. Elect.	14		35.7	42.9	7.1	14.3	2.43
	Commercial Elect.	15	6.7	28.3	45	20		2.33
	Fine Arts Elect.	4						
SCHOOL D	Constants	198	1.5	16.2	34.8	27.3	20.2	1.51
	Academic Elect.	76	2	13	31	20	10	1.79
	Shop Elect.	32	3.1	15.6	46.9	25	9.4	1.78
	House Ec. Elect.	13	15.4	61.5	23.1			2.92
	Commercial Elect.	31	16.1	32.2	29.1	22.6		2.42
	Fine Arts Elect.	4						
SCHOOL E	Constants	205		8.3	47.8	31.7	12.1	1.51
	Academic Elect.	85		7	36.5	20	36.5	1.14
	Shop Electives	35	5.7	22.8	62.8	8.3		2.26
	House Ec. Elect.	11		54.5	45.5			2.54
	Commercial Elect.	35		11.4	48.6	20	20	1.51
	Fine Arts Elect.	3						
TOTALS	Constants	1927	1.1	16.7	40.9	26.9	14.9	1.58
	Academic Elect.	664	1.8	14.4	36.2	26.6	20.7	1.49
	Shop Electives	302	2.9	23.2	52.3	16.6	4.6	2.03
	House Ec. Elect.	141	8.5	36.1	21.9	17	6.4	2.16
	Commercial Elect.	295	8.4	19.6	40	20.7	11.2	1.90
	Fine Arts Elect.	38	5.2	50	34.2	5.2	5.2	2.45

Observations of Table VII:

(1) In the large majority of cases, students' average scores in non-academic electives are higher than their average scores in academic electives.

(2) Among the non-academic electives, lowest grades were generally earned in Commercial subjects, while highest grades were usually earned in Household Economics.

(3) On the average, students earned higher grades in the constants than they did in the academic electives.

(4) While differences among schools may be noted, it seemed to the writer that no single school was doing outstandingly good or bad work in attempting to meet the needs of these students.

(B) GRADE XI

Similar procedure was used in presenting the data for the selected students in Grade XI. Table VIII presents the percentages of letter grades and the point averages earned in the various subject categories by the selected students in Grade XI.

TABLE VIII

PERCENTAGES OF LETTER GRADES AND POINT AVERAGES EARNED BY SELECTED GRADE XI STUDENTS IN ALBERTA COMPOSITE HIGH SCHOOLS, CLASSIFIED ACCORDING TO SUBJECT CATEGORIES

	Subject Categories	Total Number of Final Scores	PERCENTAGES OF LETTER GRADES					Point Averages
			H	A	B	C	D	
SCHOOL A	Constants	239	.004	9.2	39.7	30.2	20.6	1.67
	Academic Elect.	105	5.7	7.6	45.7	30.5	20.5	1.67
	Shop Electives	35	8.6	25.7	48.6	5.7	11.4	2.14
	Commercial Elect.	166	3.6	19.9	41.5	21.7	13.3	1.79
	House Ec. Elect.	41	15.2	29.3	34.1	17.1	7.3	2.14
	Fine Arts Elect.	5						
SCHOOL B	Constants	247	.004	5.7	35.2	42.3	16.7	1.31
	Academic Elect.	127	1.6	19.7	44.9	25.2	8.6	1.80
	Shop Electives	45	4.4	26.7	51.1	13.3	4.4	2.13
	Commercial Elect.	116	6.8	16.3	50	20.9	6	1.97
	House Ec. Elect.	17	17.6	23.5	35.2	23.5		2.35
	Fine Arts Elect.	33	9.1	39.4	42.4	9.1		2.48
SCHOOL C	Constants	63		12.7	31.7	30.1	25.4	1.32
	Academic Elect.	45	13.3	13.3	40	20	13.3	1.93
	Shop Electives	15	6.7	20	53.3	20		2.13
	Commercial Elect.	6						
	House Ec. Elect.	24	12.5	33.3	33.3	20.8		2.37
	Fine Arts Elect.	1						
SCHOOL D	Constants	91	1.1	10.9	38.5	35.2	14.3	1.49
	Academic Elect.	49	4.1	30.6	38.8	20.4	6.1	2.06
	Shop Electives	16	12.5	25	37.5	18.7	6.2	2.19
	Commercial Elect.	18	27.8	16.7	38.4	16.7		2.5
	House Ec. Elect.	13	15.3	38.5	23.1	23.1		2.46
	Fine Arts Elect.	4						
SCHOOL E	Constants	84		11.9	38.1	44	5.9	1.56
	Academic Elect.	46	8.7	6.5	30.4	39.1	15.2	1.54
	Shop Elect.	22	13.6	36.4	31.8	18.4		2.55
	Commercial Elect.	35		22.8	45.6	22.8	8.5	1.54
	House Ec. Elect.	12	8.3	8.3	58.3	25		2
	Fine Arts Elect.	1						
TOTALS	Constants	724	.004	8.8	37.2	36.4	17.2	1.39
	Academic Elect.	374	5	15.6	41.8	27	10.2	1.77
	Shop Electives	133	8.3	27	45.8	13.5	5.3	2.19
	Commercial Elect.	341	6.1	18.8	42.8	19.9	9.4	1.86
	House Ec. Elect.	107	13.1	28	35.5	20.6	2.8	2.35
	Fine Arts Elect.	45	8.9	44.4	40	6.7		2.61

Observations of Table VIII:

(1) As noted in Table VII, in each of the schools, students' average scores in the non-academic electives were higher than their average scores in academic electives.

(2) Again, as in Grade X, among the non-academic electives, highest grades were earned in Household Economics, while lowest grades were earned in the Commercial.

(3) However, higher grades on the average, were earned in Academic Electives than in Constants. The opposite was true in Grade X.

(4) It again appeared to the writer that no single school was doing outstandingly good or bad work in attempting to meet the needs of these students.

(C) GRADE XII

Similar procedures were used in presenting the data for the selected students in Grade XII. Table IX presents the distribution of percentages, and the point average, earned in the various subject categories by the selected students in Grade XII.

TABLE IX

PERCENTAGES OF LETTER GRADES AND POINT AVERAGES EARNED BY SELECTED GRADE XII STUDENTS IN ALBERTA COMPOSITE HIGH SCHOOLS, CLASSIFIED ACCORDING TO SUBJECT CATEGORIES

	Subject Categories	Total Number of Final Scores	PERCENTAGES OF LETTER GRADES H	A	B	C	D	Point Averages
SCHOOL A	Constants	90		4.4	42.2	33.3	20	1.98
	Academic Elect.	90	4.4	16	37.8	22.2	20	1.54
	Commercial Elect.	40	12.4	30	45	12.4		2.42
	House Ec. Elect.	17		35.3	35.3	23.5	5.9	2
	Shop Electives	17		35.3	35.3	23.5	5.9	2.42
	Fine Arts Elect.	2						
SCHOOL B	Constants	83		3.6	15.7	42.2	38.5	84
	Academic Elect.	65	1.5	21.5	40	21.5	15.4	1.72
	Commercial Elect.	54	18.7	16.7	46.3	18.5		2.35
	House Ec. Elect.	14	28.6	28.6	35.7	7.1		2.78
	Shop Electives	16	12.5	62.5	18.7	6.2		2.81
	Fine Arts Elect.	29	13.8	37.9	37.9	10.3		2.55
SCHOOL C	Constants	15			46.7	33.3	20	1.27
	Academic Elect.	35	5.7	25.7	48.6	14.2	5.7	2.11
	Commercial Elect.							
	House Ec. Elect.	1						
	Shop Electives	2						
	Fine Arts Elect.	2						
SCHOOL D	Constants	26		3.8	50	26.9	19.2	1.38
	Academic Elect.	27	7.4	25.9	44.4	18.5	3.7	2.15
	Commercial Elect.	8						
	House Ec. Elect.	3						
	Shop Electives	4						
	Fine Arts Elect.	3						
SCHOOL E	Constants	32			28.1	50	21.9	1.06
	Academic Elect.	29		10.3	58.6	20.7	10.3	1.69
	Commercial Elect.	19		31.6	57.9	10.5		2.21
	House Ec. Elect.	4						
	Shop Electives	9						
	Fine Arts Elect.	2						
TOTALS	Constants	247		3.2	32.8	37.6	26.3	1.13
	Academic Elect.	246	3.7	19.6	43.3	17.5	15.9	1.73
	Commercial Elect.	121	12.4	22.3	49.6	14.9	.008	2.31
	House Ec. Elect.	24	25	37.5	33.3	4.2		2.83
	Shop Elect.	48	6.2	47.9	31.2	10.4	4.2	2.42
	Fine Arts Elect.	36	11.1	30.5	44.4	13.9		2.39

| | | |

Observations of Table IX:

(1) The trend observed in Tables VII and VIII was continued. The difference between grades earned in non-academic subjects compared with those earned in academic subjects had widened, with the superiority of the former becoming more pronounced.

(2) In three of the schools, the numbers of students who earned final marks in the non-academic electives had declined very sharply, and comparisons, if made, would have been misleading.

(3) As in Grade XI, the selected students earned better grades in the Academic Electives than in Constants.

(4) Once again, similar grades were earned by the selected students in each school.

CHAPTER IX

HIGH SCHOOL CREDITS EARNED BY THE SELECTED STUDENTS

The Senior High School Handbook of the Alberta Department of Education outlines the minimum requirements for the High School Diploma. These regulations, which govern the subjects chosen and the credits earned by the selected students, are:

> Subject to regulations governing the choice of subjects and the standing required for obtaining credits in each subject, the following are the minimum requirements for the High School Diploma:
>
> (a) Forty to forty-six credits in prescribed constants as follows:
>
> | | |
> |---|---|
> | Language 10, 20 | 10 credits |
> | Literature 10. 20 | 6 credits |
> | English 30 | 5 credits |
> | Social Studies 10, 20, 30 | 15 credits |
> | Health and Personal Development 10 | 2-5 credits |
> | Physical Education 10 | 2-5 credits |
>
> (b) Fifty-four to sixty credits in electives. (In other words, a sufficient number of credits in electives to make a grand total of at least 100 credits.)
>
> (c) Credit in at least one high school mathematics course.
>
> (d) Credit in at least one high school science course.
>
> (e) Credits in one Grade XII subject in addition to English 30 and Social Studies 30.[16]

In presenting the data on credits earned, the organization of the selected students into grades, as previously described (p. 25), was again used.

(A) GRADE X

Table X presents detailed data on the number of credits earned by the selected students in Grade X in the various composite high schools.

TABLE X

CREDITS EARNED BY SELECTED GRADE X STUDENTS, 1954-55

	School A	School B	School C	School D	School E	TOTAL
Median	30.9	28	33.8	22.5	25.5	29.7
Mean	27.9	26.5	29	18.6	22.8	25.8
Stnd. Dev.	9.2	8.7	4.3	12.3	11.3	10.3
Crude Mode	35	25	35	25	35	35

Observations of Table X:

(1) The numbers of credits earned by the selected students in all the schools, except School D, were quite similar. This exception may be explained by the semester system operating in this school, and the effect that this system has on the grade groupings used by the writer. (p. 25)

(2) The crude mode indicated the frequency with which even successful students dropped out.

(B) GRADE XI

Table XI presents detailed data on the number of credits earned by the selected students in Grade XI in the various composite high schools.

TABLE XI

CREDITS EARNED BY SELECTED GRADE XI STUDENTS, 1954-56

	School A			School B			School C		
	X	XI	TOT.	X	XI	TOT.	X	XI	TOT.
Median	34	26.7	60	34.4	31	65.1	33.7	30.4	55.5
Mean	32.4	27.5	59.9	33	29.1	62.1	33.2	20.9	54.1
Stnd. Dev.	13.1	9	13.1	9.1	2.5	3.7	9.3	7.1	2.4
Crude Mode	35	35	75	35	35	65	35	15	55

	School D			School E			TOTAL		
	X	XI	TOT.	X	XI	TOT.	X	XI	TOT.
Median	37.5	20.4	47.6	33.3	22.6	66.7	33.7	26.9	61
Mean	26.8	19.9	46.7	31.7	33.3	65	31.6	27.3	58.9
Stnd. Dev.	7.8	8.4	3.6	5.9	4.8	9	2.7	2.6	13
Crude Mode	35	25	45	35	35	75 65	35	35	75

Observations of Table XI:

(1) The number of credits earned in Grade X by these students was considerably higher than the credits earned by the Grade X group (Table X).

(2) The numbers of credits earned by the selected students in the various schools were quite similar in Grade X, but more varied in Grade XI, and also varied when total credits at the end of Grade XI were considered.

(3) The number of credits earned while these students were in Grade XI was considerably lower than the number which they earned in Grade X.

(C) GRADE XII

Table XII presents detailed data on the number of credits earned by the selected students in Grade XII in the various composite high schools.

TABLE XII

CREDITS EARNED BY SELECTED GRADE XII STUDENTS, 1954-57

	School A					School B					School C				
	X	XI	TOT. XI	XII	TOT. XII	X	XI	TOT. XI	XII	TOT. XII	X	XI	TOT. XI	XII	TOT. XII
Median	34.6	33	71	25.7	96.7	35.1	33.6	68.5	25.3	95.8	34.6	34	69.5	26.2	97.2
Mean	33.4	31.1	64.5	25.2	89.7	33.6	32	65.6	24.4	90	31.1	31.9	63	26	89
Stnd. Dev.	1.2	6.1	8.7	6.1	11.2	5.2	5	9.2	6.6	12.4	6.7	6.2	10.1	8.2	5.5
Crude Mode	35	35	75	25	95	35	35	75	25	105	35	35	75	25	105

	School D					School E					TOTAL				
	X	XI	TOT. XI	XII	TOT. XII	X	XI	TOT. XI	XII	TOT. XII	X	XI	TOT. XI	XII	TOT. XII
Median	33.8	32.5	68	23.8	95.5	35.2	34.4	72.5	26.7	101.6	34.7	32.6	70	25.5	96.3
Mean	31.2	30.6	61.8	20.7	82.5	34.4	33.2	67.6	26.2	93.8	33.3	31.7	65	25.4	90.4
Stnd. Dev.	7.8	6.1	3.4	9	12.2	2.3	6.2	4.7	6.9	9.2	4.9	5.5	9.8	6.6	12.1
Crude Mode	35	35	75	25	105	35	35	75	25	105	35	35	75	25	105

Observations of Table XII:

(1) The similarity among all schools in the number of credits earned by the selected Grade XII students, was striking.

(2) In Grade X, this group did considerably better than either the Grade X, (Table X) or the Grade XI group. (Table XI).

(3) In Grade XI, this group did better than the Grade XI group, (Table XI) and had earned more credits at the end of Grade XI. (Table XI).

(4) The number of credits earned by these students in Grade XII dropped sharply from the credits which they earned in Grades X and XI.

General Observations of the Credits Earned by the Selected Students:

The data presented in this chapter on the high school credits earned by the selected students revealed three interesting trends. Probably the most obvious was the gradual drop in credits earned in each year. Thus, Grade XII students earned a mean of 33.3 credits in Grade X, 31.7 in Grade XI and 25.4 in Grade XII.

Secondly, the Grade XII group earned more credits in Grade X and Grade XI than either the Grade X or the Grade XI groups. It was noted in Chapter V, "Attendance of the Selected Students", that the Grade XII group also had better

attendance records than either the Grade X or the Grade XI groups. Thus, there appears to be a positive relationship between good attendance records and academic success.

Thirdly, it was noted that credits earned in the year before drop-out were lower than in the previous year. A similar decline in attendance was also noted, again pointing out the relationship between attendance and academic success.

FOOTNOTES TO CHAPTER IX

[16]Province of Alberta, Department of Education, Senior High School Handbook: 1957 (Edmonton: Queen's Printer, 1957), p. 20.

CHAPTER X

HIGH SCHOOL GRADUATES

Special consideration should be given at this time to those selected students who completed their years in high school successfully. Keeping in mind that over 70% of the selected students were drop-outs, it was no mean feat for these few to persevere and attain success where so many had failed. As described previously, (p. 2), alternative standards are set up for completing high school. Students are able to earn a high school diploma with or without university matriculation. The Senior High School Handbook explains:

> The High School Diploma is an official document issued by the Department of Education, certifying that the holder has completed the required program of instruction through attendance at a high school, ...
>
> ....This diploma does not itself grant matriculation. The student is expected to have so arranged his program that it includes the subjects especially required by the university and that he has secured the necessary standing in these subjects.[17]

Figure VII shows the percentages of selected students who earned a high school diploma and matriculation standing.

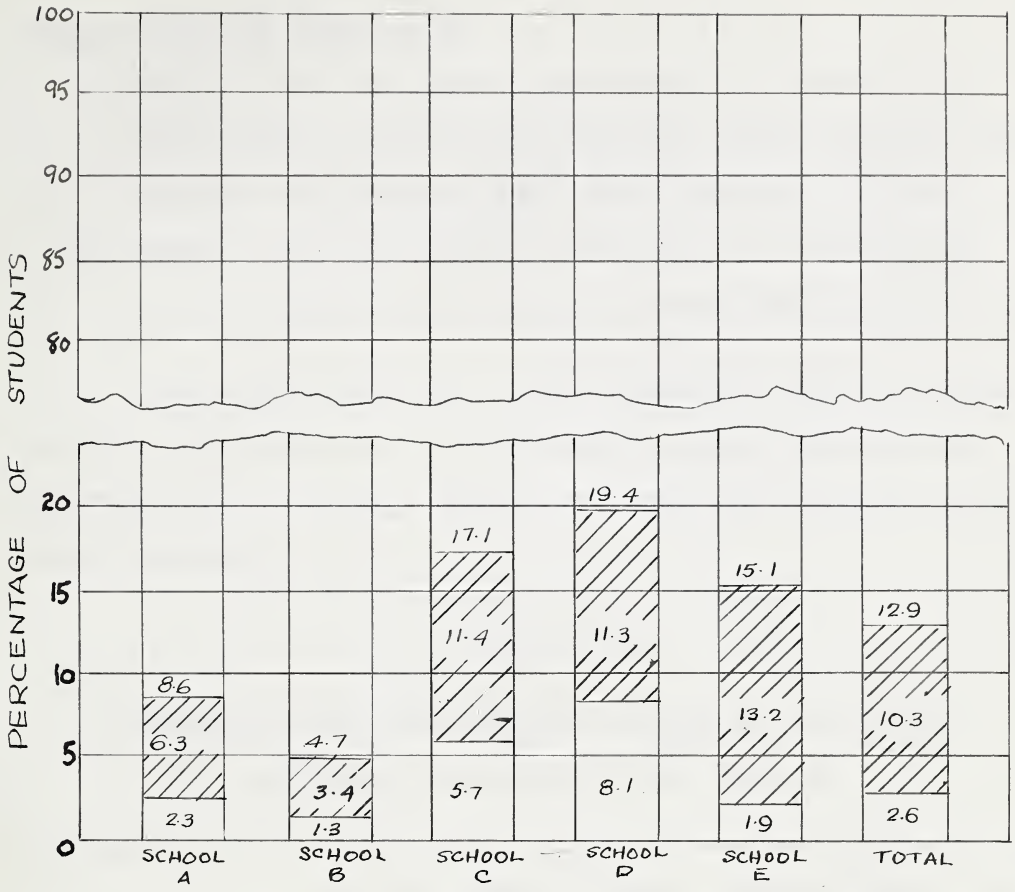


FIGURE VII

PERCENTAGES OF SELECTED STUDENTS WHO ATTAINED HIGH SCHOOL DIPLOMAS AND MATRICULATION STANDING

Diploma without Matriculation

Matriculation and Diploma

Observations of Figure VII:

(1) School D had the largest percentage of students who matriculated successfully (8.1 %), and the largest percentage who attained high school diplomas (19.4 %).

(2) School E had the largest percentage of students who received high school diplomas without matriculation (13.2%).

Table XIII gives the actual numbers of selected students in each school who attained high school diplomas and matriculation standing. Figure VII gave the percentages of these students.

TABLE XIII

NUMBERS OF SELECTED STUDENTS ATTAINING HIGH SCHOOL DIPLOMAS AND MATRICULATION STANDING

	School A	School B	School C	School D	School E	TOTAL
Diploma	11	5	4	5	7	32
Matriculation	4	2	2	3	1	12

A final group remains: the foregoing data described the academic careers of the selected students during their first three years in high school. Several in each school returned for a fourth year. While it was beyond the scope of

this study, one observation of these students was made. Nearly all were attempting courses to complete their matriculation standing. Few were aimed at the target of a high school diploma. It seemed that the goal of matriculation was so worthwhile as to merit an extra year in high school. Table XIV presents the numbers of students and the percentages of students who remained in school for a fourth year.

TABLE XIV

NUMBERS AND PERCENTAGES OF THE SELECTED STUDENTS WHO ENROLLED FOR A FOURTH YEAR OF HIGH SCHOOL

	Number	Per Cent
School A	14	8.0 %
School B	12	8.2 %
School C	5	14.3 %
School D	4	9 %
School E	3	6.8 %
TOTAL	38	8 %

Observations of Table XIV:

(1) Nearly twice the per cent of selected students were enrolled in School C for their fourth year in high school than in any of the other schools.

(2) The other four schools were very similar.

FOOTNOTES TO CHAPTER X

[17]Ibid., p. 20.

CHAPTER XI

SUMMARY AND CONCLUSIONS

(1) The number of students selected for this study was 25.8% of the total Grade X enrollment in the five schools.

(2) While an IQ of 100 was arbitrarily chosen as the upper limit for selecting the students, analysis of the group showed that the great majority had IQ's ranging from 95 - 100, i. e., most of them were clustered around the upper limit, with only a few below 90.

(3) The selected students, in general, had poor attendance records. Those who dropped out of school after Grade X had a mean attendance of 178.6 days during their Grade X year, representing a loss of nearly a month of school. Similarly, poor attendance records were noted for those who dropped out after Grade XI. As noted previously (p. 25), poor attendance is a cause of failure and drop-out from school. To lower their high failure and drop-out rates, these students should be cautioned, therefore, against unnecessary absenteeism.

(4) The high prestige of the matriculation program was commented upon (p. 33), and the courses of study chosen by the selected students seemed to reflect this prestige. In Grade X, 37% of the selected students chose the matriculation program; in Grade XI the percentage was

29.3, and in Grade XII, 31.9. It is the opinion of this writer that some method of persuading these students to select courses more suited to their abilities, rather than those which are bearers of prestige, must be found.

(5) The large number of drop-outs was outstanding. Over 35% of the total number of students enrolled in Grade X had dropped out before they reached Grade XI, a further 33% had dropped out before they reached Grade XII, and another 4% dropped out while they were in Grade XII. The sharp decline in the drop-out rate for Grade XII as contrasted to that in Grades X and XI, should be noted.

(6) Drop-outs analysed according to sex revealed contradictory information. Drawing conclusions on the possibility of any relationship between the number of drop-outs and sex, therefore, is hazardous. Previous studies (p. 42) indicated that more boys than girls drop out of high school. The opposite was found to be the case in this study. However, when considered on a grade basis, many more girls than boys dropped out in Grade X, while boys led drop-outs slightly in Grades XI and XII.

(7) The limitations in considering drop-outs according to program of study have already been pointed out (p. 33). As would be expected, fewer students drop out of the Matriculation program than out of the General and

Commercial programs.

(8) The data presented on the subject category records (Chapter VIII) provided insights into the attainments of the selected students. One conclusion was very obvious - in every school, in each grade, higher marks in terms of letter grades and point averages were earned in the non-academic subjects than in the academic subjects. Yet, in each grade, fewer selected students enrolled in the non-academic courses. Again, it is the opinion of this writer that some way must be found to persuade these students to take those subjects more nearly suited to their needs and abilities.

(9) In view of the large numbers of students who earned "D" grades in Constant courses, especially in Grade XI and Grade XII, it seems that these courses may be too difficult for students of low ability. The writer feels, therefore, that while English and Social Studies should remain as constants, perhaps separate courses in these fields should be developed for students in composite high schools who are not planning to enter university.

(10) The number of credits earned in each grade declined as the selected students proceeded through high school. A seeming positive relationship between number of credits earned and good attendance records was also noted. Further, many students who had completed their high school

year successfully, in terms of credits earned, dropped out in spite of their apparent success.

(11) Thirty-two of the four hundred and fifty-two selected students (7.1%) received high school diplomas, while twelve (2.6%) successfully matriculated. A larger proportion of the selected students in School D were successful in obtaining matriculation standing than was the case in any other school. In view of this fact, the question might be raised whether the semester system in operation in this school is better able to meet the needs of students of low ability than is the normal school term in operation in the four other schools.

(12) A final conclusion remains. If the composite high school is to meet the needs of all students, the writer feels that many changes may be necessary. In view of the findings of this study, it appears that few students of low ability in composite high schools are making best use of the opportunities available to them for furthering their education.

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